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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,766	10/19/2001	Yasumasa Takao	215217US0	6675

22850 7590 05/30/2003

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EXAMINER

UHLIR, NIKOLAS J

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/981,766

Applicant(s)

TAKAO ET AL.

Examiner

Nikolas J. Uhler

Art Unit

1773

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 09 May 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☒ Applicant's reply has overcome the following rejection(s): The 112 1st rejection of claims 1-5 and 7.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

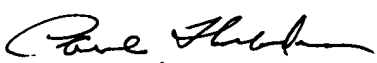
Claim(s) allowed: none.

Claim(s) objected to: none.

Claim(s) rejected: 1-5, 7 and 10-20.

Claim(s) withdrawn from consideration: 6, 8-9.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
10. ☐ Other: \_\_\_\_\_

  
Paul Thibodeau  
Supervisory Patent Examiner  
Technology Center 1700

Continuation of 2. NOTE: The insertion of the limitation: "with a ratio of the long-axis diameter to the short-axis diameter being more or less 1:1" into claim 1 is a new limitation that was not earlier presented in the examination of the application, and requires further search and/or consideration to determine patentability. Specifically, the issue that is newly presented is the fact that the particles can have a ratio long axis diameter to short axis diameter of "more or less" 1:1. In the prior presented claims, the applicant required the particles to be spherical, which necessarily requires the ratio of the long axis diameter to short axis diameter of the particles to be "exactly" 1:1. The new claim language allows for the particles to be slightly non-spherical, and thus broadens the scope of the claim.

Continuation of 5. does NOT place the application in condition for allowance because: The applicants arguments are deemed to be unpersuasive. The applicant has argued that the examiner has failed to provide a prima facie case of obviousness as to whether the particles of the applied prior art are spherical, as required by claim 1. The applicant states that the examiners has suggested that the combination of Weimer '121 with Pratsinis "inherently" achieves the claimed particle shape, but has provided no proof of this fact. Furthermore, the applicant cites that the claimed spherical particles cannot be achieved each and every time by the process utilized in the prior art, and cites that Weimer 121 states that the product is a "light agglomerate." Further, the applicants further cite that pratsinis shows that a powder formed at a reactor temperature of 1673-1873 have hexagonal crystals and tend to agglomerate. The examiner acknowledges the fact that the products produced by Weimer 121 can be in the form of light agglomerates. However, this point is largely irrelevant. Pratsinis clearly shows that spherical AlN powder is made by a floating nitridation process at temperatures greater than 1373K. Specifically, Pratsinis states "uniform spherical particles were formed at temperatures greater than 1373K or greater, as opposed to a mixture of rod shaped and spherical particles at lower temperatures (column 3, lines 32-35). The examiner maintains that this statement clearly establishes that spherical AlN particles are formed by a floating nitridation process utilizing temperatures >1373K. Thus, Weimer 121, which utilizes a floating nitridation process at temperatures ~1873K will clearly form spherical particles at some point during the process. The issue of whether the particles after they are formed tend to agglomerate is irrelevant, as the individual particles formed by this process (prior to their agglomeration) meet the applicants claim limitations. The applicants assertion that Pratsinis teaches that particles formed at temperatures between 1673-1873K "tend to agglomerate" supports this argument, as it clearly establishes that the particles are formed, and then they "may" agglomerate. The examiner agrees that the ultimate final product of the pratsinis and weimer patents may be a light agglomerate. However, the applicants arguments are not persuasive in establishing that at some point in a floating nitridation process at a temperature >1373K, spherical particles meeting the applicants requirements will be formed.